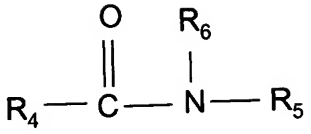
WHAT IS CLAIMED IS:

1. A tertiary amide of the formula:

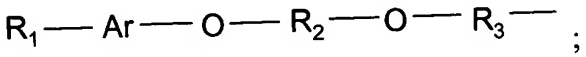


or pharmaceutically acceptable salts thereof

wherein R_4 is a fatty group of 11-29 carbon atoms;

R_5 and R_6 are independently lower alkyl aryl, aryl lower alkyl, or fatty group containing 11-29 carbon atoms or R_7;

R_7 is



;

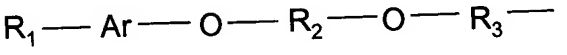
R_2 and R_3 are independently lower alkylene groups containing 1-6 carbon atoms,

R_1 is a lower alkyl, and

Ar is aryl.

2. The tertiary amide of Claim 1 wherein R_4 is a fatty group containing 15-21 carbon atoms.

3. The tertiary amide of Claim 1 wherein R_5 is aryl or aryl lower alkyl; and R_6 is



;

R_2 and R_3 are independently alkylene containing 1-3 carbon atoms; and

Ar is aryl

4. The tertiary amide according to Claim 3 wherein Ar is phenyl.

5. The tertiary amide according to Claim 4 wherein R_5 is aryl lower alkyl.

6. The tertiary amide according to Claim 5 wherein R_5 is benzyl.

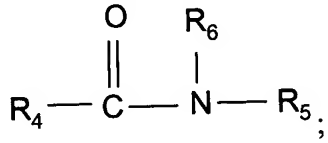
7. The tertiary amide according to Claim 5 wherein R_4 is saturated.

8. The tertiary amide according to Claim 5 wherein R_4 is unsaturated.

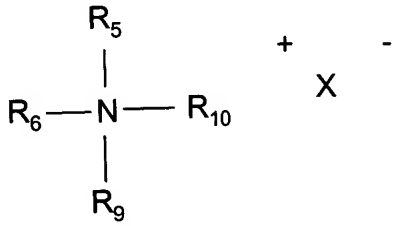
9. The tertiary amide according to Claim 8 wherein R_4 contains 1-8 carbon-carbon double bonds.

10. The tertiary amide according to Claim 1 which is distearyl stearamide, distearyl linoleamide, benzethonium linoleamide or benzethonium stearamide.

11. A mixture comprising a tertiary amide of a formula

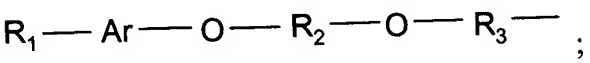


or pharmaceutically acceptable salts and a quaternary ammonia salt of the formula



wherein R_5, R_6, R_9 and R_{10} are independently lower alkyl, aryl lower alkyl, R_7 or fatty group containing 11-29 carbon atoms, wherein at least one of R_5, R_6, R_9 and R_{10} is a fatty group and each of said fatty group is an aliphatic group which may be completely saturated or contain 1-8 carbon-carbon double bonds;

R_7 is



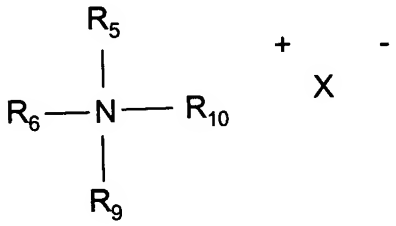
;

R_1 is alkyl containing 1-15 carbon atoms;

R_2 and R_3 are independently lower alkylene and

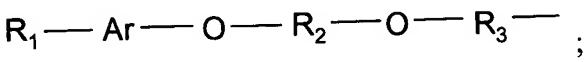
X is a counterion.

12. A method for treating insect bites on a mammal which comprises applying topically to the mammal in the locus of the insect bite an amount effective of a quaternary ammonium salt for treating insect bites of the formula



wherein R_5, R_6, R_9 and R_{10} are independently lower alkyl or fatty group, aryl lower alkyl or R_7 wherein at least one of R_5, R_6, R_9 and R_{10} is a fatty group, each of said fatty group containing 11-29 carbon atoms and may be completely saturated or contain 1-8 carbon-carbon double bonds,

R_7 is



;

R_1 is alkyl containing 1-15 carbon atoms,

R_2 and R_3 are independently lower alkylene, and

X is a counter ion.

13. The method according to Claim 12 wherein R_9 and R_{10} are lower alkyl and R_5 and R_6 are fatty groups.

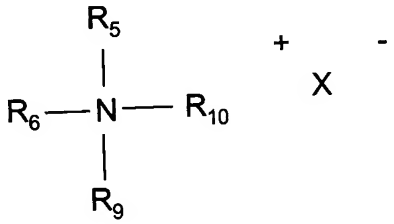
14. The method according to Claim 12 wherein R_{10} and R_9 are lower alkyl and R_5 and R_6 are fatty groups containing 15-21 carbon atoms.

15. The method according to Claim 14 wherein R_5 and R_6 are independently saturated fatty group.

16. The method according to Claim 14 wherein R_5 and R_6 are independently unsaturated fatty group.

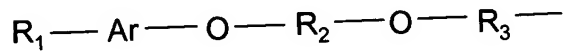
17. The method according to Claim 12 wherein an anti-oxidant is additionally present.

18. A pharmaceutical composition comprising an effective amount of the reaction product of the quaternary ammonium salt of the formula



and a fatty acid of the formula R_8COOH in an aqueous solvent under conditions effective to form an ion pair between said quaternary ammonium salt and fatty acid wherein R_5, R_6, R_9 and R_{10} are independently lower alkyl, aryl, aryl lower alkyl, fatty group, or R_7, wherein at least one of R_5, R_6, R_9 and R_{10} are a fatty group, said fatty group is an aliphatic group containing 11-29 carbon atoms and 0-8 carbon-carbon double bonds;

R_7 is



;

R_1 is alkyl containing 1-15 carbon atoms;

R_2 and R_3 are independently lower alkylene and X is a counterion;

R_8 is a fatty group containing 11-29 carbon atoms;

wherein the molar ratio of the quaternary ammonium salt to fatty acid ranges from about 1:10 to about 10:1.

19. The pharmaceutical composition according to Claim 18 wherein R_5 and R_6 are independently a fatty group and R_9 and R_{10} are lower alkyl.

20. The pharmaceutical composition according to Claim 19 wherein the fatty group contains 15-21 carbon atoms.

21. The pharmaceutical composition according to Claim 18 wherein R_9 and R_{10} are independently alkenyl groups containing 15-21 carbon atoms and one, two, three, four, five or six carbon-carbon double bonds.

22. The pharmaceutical composition according to Claim 18 wherein the molar ratio of ammonium salt to fatty acid from about 1:5 to about 5:1.

23. The pharmaceutical composition according to Claim 22 wherein the ratio ranges from about 1:2 to about 2:1.

24. The pharmaceutical composition according to Claim 23 wherein the ratio is about 1:1.

25. A method for killing microorganism on the surface of objects which comprises applying the pharmaceutical composition of Claim 18 to the surface of said object.

26. A carrier composition for association with a topical pharmaceutical composition wherein said carrier composition comprises a skin penetrating effective amount of the tertiary amide of Claim 1.

27. A pharmaceutical composition comprising a pharmaceutically effective amount of a drug in association with a transdermal carrier, said transdermal carrier comprising the tertiary amide of Claim 1.

28. A method for enhancing the penetration of a drug through the skin of a mammal which comprises mixing the drug with a skin penetrating effective amount of the tertiary amide of Claim 1.

29. The method according to Claim 27 wherein the tertiary amide is present in the pharmaceutical composition in an amount ranging from about 0.3% to about 10% by weight of the pharmaceutical composition.

30. The method according to Claim 27 wherein the weight ratio of the tertiary amide to the active drug is greater than 20.

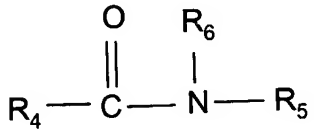
31. The method according to Claim 27 wherein R_4 is unsaturated.

32. The method according to Claim 27 wherein R_5 is lower arylalkyl and R_6 is R_1-Ar-O-R_2-O-R_3.

33. The method according to Claim 32 wherein Ar is phenyl.

34. The method according to Claim 31 wherein R_5 is benzyl and Ar is phenyl.

35. A mixture comprising two or more different tertiary amides of the formula

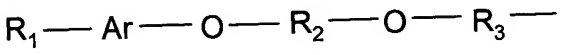


or pharmaceutically acceptable salts thereof wherein

R_4 is a fatty group of 11-29 carbon atoms;

R_5 and R_6 are independently lower alkyl aryl, aryl lower alkyl, or fatty group containing 11-29 carbon atoms or R_7;

R_7 is



;

R_2 and R_3 are independently lower alkylene groups containing 1-6 carbon atoms,

R_1 is a lower alkyl, and

Ar is aryl.

36. The mixture of Claim 34 wherein in at least one of the tertiary amides, R_5 is an unsaturated fatty group and R_6 is an aryl, aryl lower alkyl or R_7.

37. A multi-layered pharmaceutical composition comprising a first layer comprised of the tertiary amide of Claim 1, a second layer comprised of a non-ionic surfactant, a third layer comprised of nutrients and a top layer comprised of a water soluble polymer.

38. The multi-layered pharmaceutical composition according to Claim 36 which additionally comprises a wax layer, said wax layer located between the water soluble polymer and the surfactant layer.

39. The multi-layer pharmaceutical composition according to Claim 36 wherein the top layer is povidone.

40. A method for protecting the skin of a mammal from chafing, chapping or contact dermatitis comprising applying to the skin of said mammal, a layered composition comprising the lower layer comprised of a tertiary amide of Claim 1, a second layer comprising a non-ionic surfactant and nutrients for the skin, and the top layer comprising a water soluble polymer.

41. The method according to Claim 40 wherein the layered composition additionally comprises a wax layer, said wax layer located between the water soluble polymer and the surfactant/nutrient layer.

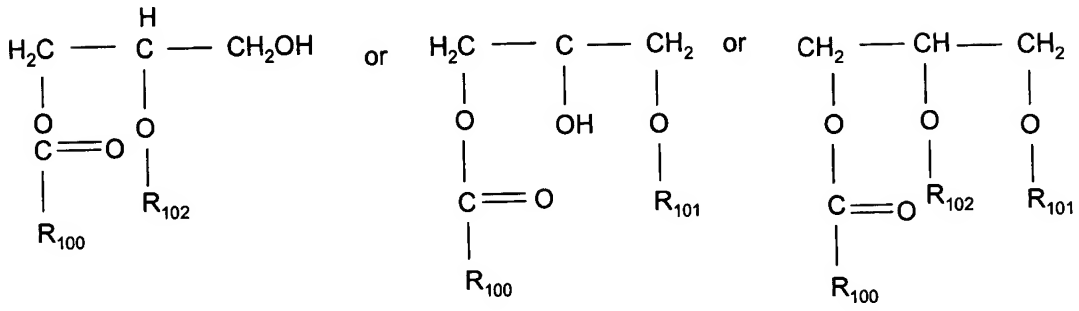
42. A product prepared by the process comprising:

(a) reacting a fatty alcohol containing 12-30 carbon atoms with a fatty acid containing 12-30 carbon atoms under esterfication conditions to form a first fatty acid ester;

(b) reacting glycerol with a second fatty acid under esterfication conditions to form a monoglyceride;

(c) reacting the product of step (a) with the product of step (b) under conditions effective condition to form an ether.

43. The product according to Claim 42 having the formula



wherein R_{100} is fatty groups having 11-29 carbon atoms and R_{101} and R_{102} are independently a fatty group having 12-30 carbon atoms.

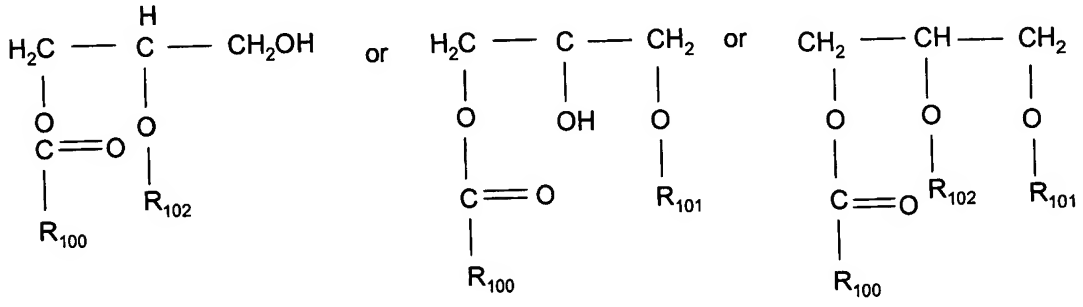
44. The product according to Claim 42 wherein the first and second fatty acids contain 16-22 carbon atoms.

45. A carrier composition comprising the product of Claim 42.

46. A carrier composition comprising the product of Claim 44.

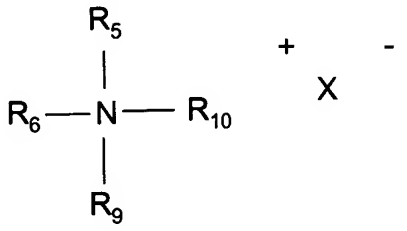
47. A method for enhancing the penetration of a drug through the skin of a mammal which comprises mixing the drug with a skin penetrating effective amount of the product of Claim 42.

48. The method according to Claim 47 wherein the product has the formula



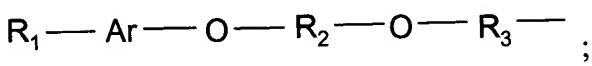
wherein R_{100} is fatty groups having 11-29 carbon atoms and R_{101} and R_{102} are independently a fatty group having 12-30 carbon atoms.

49. The product of Claim 42 admixed with quaternary ammonium salt of the formula



wherein R_5, R_6, R_9 and R_{10} are independently lower alkyl, fatty group, aryl lower alkyl or R_7 wherein at least one of R_5, R_6, R_9 and R_{10} is a fatty group, each of said fatty group containing 11-29 carbon atoms and may be completely saturated or contain 1-8 carbon-carbon double bonds,

R_7 is



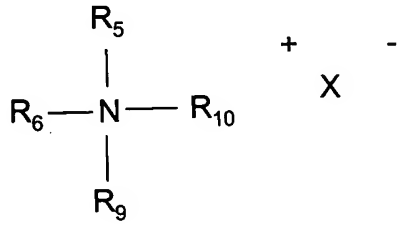
;

R_1 is alkyl containing 1-15 carbon atoms,

R_2 and R_3 are independently lower alkylene, and

X is a counter ion.

50. A carrier composition comprising the product of Claim 42 admixed with a quaternary ammonium salt of the formula



wherein R_5, R_6, R_9 and R_{10} are independently lower alkyl, fatty group, aryl lower alkyl or R_7 wherein at least one of R_5, R_6, R_9 and R_{10} is a fatty group, each of said fatty group

containing 11-29 carbon atoms and may be completely saturated or contain 1-8 carbon-carbon double bonds,

R_7 is

$$R_1 — Ar — O — R_2 — O — R_3 —$$;

R_1 is alkyl containing 1-15 carbon atoms,

R_2 and R_3 are independently lower alkylene, and
X is a counter ion.

51. A pharmaceutical composition for topical application comprising a pharmaceutically effective amount of a drug and the carrier composition of Claim 50.

52. The pharmaceutical composition according to Claim 50 wherein the drug and the carrier are present in a molar ratio of drug to carrier of greater than about 20.

53. The pharmaceutical composition according to Claim 51 wherein the drug and the carrier are present in a molar ratio of between about 5 and about 20.

54. A method for treating skin sores, chapping, chafing, skin bruises or wounds on a mammal which comprises applying to the locus of the skin injury a pharmaceutical composition comprising a pharmaceutically effective amount of a drug and a skin penetrating effective amount of a carrier composition according to claim 26 or 42.

55. The pharmaceutical composition according to Claim 54 wherein the drug and the carrier are present in a molar ratio of drug to carrier ranging from between about 5 to about 20.

56. A pharmaceutical composition for treating sun-damaged skin comprising a pharmaceutical effective amount of a drug for treating said sun-damaged skin in

association with a transdermal carrier capable of penetrating the skin of a mammal, said transdermal carrier comprising of a skin penetrating effective amount of a tertiary amide according to Claim 1 and a water extract of lilium longiflorum.

57. A transdermal carrier comprising a skin penetrating effective amount of tertiary amide according to Claim 1 and an ion pair prepared by the reaction of a quaternary ammonium salt and a fatty acid and under conditions effective to form a quaternary ammonium salt; fatty acid ion pair.

58. The carrier according to Claim 57 wherein the molar ratio of tertiary amide to ion pair ranges from about 1:1 to about 8:1.

59. The carrier according to Claim 57 wherein the molar ratio is about 4:1.

60. The carrier composition according to Claim 59 wherein the molar ratio is about 1:2.

61. A method for treating chapped or cracked skin on a mammal comprising a quaternary ammonium product, and a carrier composition according to Claim 26 or 42.

62. An amide hydrate of the tertiary amide of any one of Claims 1-10.

63. A gel comprising the tertiary amide of any one of Claims 1-10.